

**Please amend claims 3-7, and 9 as follows:**

3. (AMENDED) A method for processing a signal as in Claim 2, wherein said look-up table is loaded during initialization of [said] system.

4. (AMENDED) A method for processing a signal that includes X, Y, and intensity data sets for each pixel of said sensor from an image sensor receiving a substantially [ringh] ring shaped image as in claim [13] 3, comprising the further step of discarding all data sets whose intensity signal does not exceed a predetermined value.

5. (AMENDED) A method for processing a signal that includes X, Y, and intensity data sets for each pixel of said sensor from an image sensor receiving a substantially ring shaped image as in claim 4, wherein said predetermined value is set during calibration to include a range of values within an expected deviation of the radius of [said] a tube being analyzed.

6. (AMENDED) A method for processing a signal that includes X, Y, and intensity data sets for each pixel of said sensor from an image sensor receiving a substantially ring shaped image as in claim [14] 4, wherein said predetermined value is set during calibration to include only a range of values within an expected deviation of the intensity of a reflected signal.

7. (AMENDED) A method for processing a signal that includes X, Y, and intensity data sets for each pixel of said sensor from an image sensor receiving a substantially ring shaped image as in claim 4, further comprising the step of converting the analog output of an image sensor into a digital signal by synchronizing the clock of the image sensor with the intensity output to produce [said] an X and said Y signal.

9. (AMENDED) A method for processing a signal that includes X, Y, and intensity data sets for each pixel of said [sensor from an] image sensor receiving a substantially ring shaped image as in claim 8, further including the step of storing in said register at least one of each angle, radius, intensity and data set which falls [wherein values] within a preselected range [are stored in said register].

Applicants assert that no new matter has been introduced into amended Claim 3-7 and 9. A clean copy of Claims 1, 2 and 8 and amended Claims 3-7 and 9 have been included in this response for the Examiner's convenience.